

SEQUENCE LISTING

<110> Adams, Sean H
 Chui, Clarissa
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Met Ser Gln Leu Val Leu Pro Cys His Thr Asn Gln Arg Gly Glu Leu
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Ser Val Gly Gln Leu Leu Lys Trp Ile Asp Thr Thr Ala Cys Leu Ser
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Ala Glu Arg His Ala Gly Cys Pro Cys Val Thr Ala Ser Met Asp Asp
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Ile Tyr Phe Glu His Thr Ile Ser Val Gly Gln Val Val Asn Ile Lys
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Ala Lys Val Asn Arg Ala Phe Asn Ser Ser Met Glu Val Gly Ile Gln
115 120 125

Val Ala Ser Glu Asp Leu Cys Ser Glu Lys Gln Trp Asn Val Cys Lys
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Ala Leu Ala Thr Phe Val Ala Arg Arg Glu Ile Thr Lys Val Lys Leu
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Lys Gln Ile Thr Pro Arg Thr Glu Glu Glu Lys Met Glu His Ser Val
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Ala Ala Glu Arg Arg Arg Met Arg Leu Val Tyr Ala Asp Thr Ile Lys
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Asp Leu Leu Ala Asn Cys Ala Ile Gln Gly Asp Leu Glu Ser Arg Asp
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Cys Ser Arg Met Val Pro Ala Glu Lys Thr Arg Val Glu Ser Val Glu
210 215 220

Leu Val Leu Pro Pro His Ala Asn His Gln Gly Asn Thr Phe Gly Gly
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Gln Ile Met Ala Trp Met Glu Asn Val Ala Thr Ile Ala Ala Ser Arg
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Leu Cys Arg Ala His Pro Thr Leu Lys Ala Ile Glu Met Phe His Phe
260 265 270

Arg Gly Pro Ser Gln Val Gly Asp Arg Leu Val Leu Lys Ala Ile Val
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Asn Asn Ala Phe Lys His Ser Met Glu Val Gly Val Cys Val Glu Ala
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Tyr Arg Gln Glu Ala Glu Thr His Arg Arg His Ile Asn Ser Ala Phe

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Ser Ala Arg Lys Lys Ile Arg Leu Asp Arg Lys Tyr Ile Val Ser Cys						
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Lys Gln Thr Glu Val Pro Leu Ser Val Pro Trp Asp Pro Ser Asn Gln						
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Val Tyr Leu Ser Tyr Asn Asn Val Ser Ser Leu Lys Met Leu Val Ala						
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Lys Asp Asn Trp Val Leu Ser Ser Glu Ile Ser Gln Val Arg Leu Tyr						
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Thr Leu Glu Asp Asp Lys Phe Leu Ser Phe His Met Glu Met Val Val						
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His Val Asp Ala Ala Gln Ala Phe Leu Leu Leu Ser Asp Leu Arg Gln						
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Arg Pro Glu Trp Asp Lys His Tyr Arg Ser Val Glu Leu Val Gln Gln						
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Val Asp Glu Asp Asp Ala Ile Tyr His Val Thr Ser Pro Ala Leu Gly						
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Gly His Thr Lys Pro Gln Asp Phe Val Ile Leu Ala Ser Arg Arg Lys						
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Pro Cys Asp Asn Gly Asp Pro Tyr Val Ile Ala Leu Arg Ser Val Thr						
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Leu Pro Thr His Arg Glu Thr Pro Glu Tyr Arg Arg Gly Glu Thr Leu						
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Cys Ser Gly Phe Cys Leu Trp Arg Glu Gly Asp Gln Leu Thr Lys Cys						
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Cys Trp Val Arg Val Ser Leu Thr Glu Leu Val Ser Ala Ser Gly Phe
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Tyr Ser Trp Gly Leu Glu Ser Arg Ser Lys Gly Arg Arg Ser Asp Gly
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Pro Val Ala Lys Ile Asn Ser Arg Phe Gly Tyr Leu Gln Asp Thr
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<400> 4

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Phe Ser Asn Arg Thr Ser Arg Lys Ser Ala Leu Arg Ala Gly Asn Asp
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Ser Ala Met Ala Asp Gly Glu Gly Tyr Arg Asn Pro Thr Glu Val Gln
 35 40 45

Met Ser Gln Leu Val Leu Pro Cys His Thr Asn Gln Arg Gly Glu Leu
 50 55 60

Ser Val Gly Gln Leu Leu Lys Trp Ile Asp Thr Thr Ala Cys Leu Ser
 65 70 75 80

Ala Glu Arg His Ala Gly Cys Pro Cys Val Thr Ala Ser Met Asp Asp
 85 90 95

Ile Tyr Phe Glu His Thr Ile Ser Val Gly Gln Val Val Asn Ile Lys
100 105 110

Ala Lys Val Asn Arg Ala Phe Asn Ser Ser Met Glu Val Gly Ile Gln
115 120 125

Val Ala Ser Glu Asp Leu Cys Ser Glu Lys Gln Trp Asn Val Cys Lys
130 135 140

Ala Leu Ala Thr Phe Val Ala Arg Arg Glu Ile Thr Lys Val Lys Leu
145 150 155 160

Lys Gln Ile Thr Pro Arg Thr Glu Glu Glu Lys Met Glu His Ser Val
165 170 175

Ala Ala Glu Arg Arg Arg Met Arg Leu Val Tyr Ala Asp Thr Ile Lys
180 185 190

Asp Leu Leu Ala Asn Cys Ala Ile Gln Gly Asp Leu Glu Ser Arg Asp
195 200 205

Cys Ser Arg Met Val Pro Ala Glu Lys Thr Arg Val Glu Ser Val Glu
210 215 220

Leu Val Leu Pro Pro His Ala Asn His Gln Gly Asn Thr Phe Gly Gly
225 230 235 240

Gln Ile Met Ala Trp Met Glu Asn Val Ala Thr Ile Ala Ala Ser Arg
245 250 255

Leu Cys Arg Ala His Pro Thr Leu Lys Ala Ile Glu Met Phe His Phe
260 265 270

Arg Gly Pro Ser Gln Val Gly Asp Arg Leu Val Leu Lys Ala Ile Val
275 280 285

Asn Asn Ala Phe Lys His Ser Met Glu Val Gly Val Cys Val Glu Ala
290 295 300

Tyr Arg Gln Glu Ala Glu Thr His Arg Arg His Ile Asn Ser Ala Phe
305 310 315 320

Met Thr Phe Val Val Leu Asp Ala Asp Asp Gln Pro Gln Leu Leu Pro

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Trp Ile Arg Pro Gln Pro Gly Asp Gly Glu Arg Arg Tyr Arg Glu Ala		
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Ser Ala Arg Lys Lys Ile Arg Leu Asp Arg Lys Tyr Ile Val Ser Cys		
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Lys Gln Thr Glu Val Pro Leu Ser Val Pro Trp Asp Pro Ser Asn Gln		
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Val Tyr Leu Ser Tyr Asn Asn Val Ser Ser Leu Lys Met Leu Val Ala		
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Lys Asp Asn Trp Val Leu Ser Ser Glu Ile Ser Gln Val Arg Leu Tyr		
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Thr Leu Glu Asp Asp Lys Phe Leu Ser Phe His Met Glu Met Val Val		
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His Val Asp Ala Ala Gln Ala Phe Leu Leu Leu Ser Asp Leu Arg Gln		
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Arg Pro Glu Trp Asp Lys His Tyr Arg Ser Val Glu Leu Val Gln Gln		
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Val Asp Glu Asp Asp Ala Ile Tyr His Val Thr Ser Pro Ala Leu Gly		
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Gly His Thr Lys Pro Gln Asp Phe Val Ile Leu Ala Ser Arg Arg Lys		
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Pro Cys Asp Asn Gly Asp Pro Tyr Val Ile Ala Leu Arg Ser Val Thr		
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Leu Pro Thr His Arg Glu Thr Pro Glu Tyr Arg Arg Gly Glu Thr Leu		
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Cys Ser Gly Phe Cys Leu Trp Arg Glu Gly Asp Gln Leu Thr Lys Val		
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Ser Tyr Tyr Asn Gln Ala Thr Pro Gly Val Leu Asn Tyr Val Thr Thr		
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Asn Val Ala Gly Leu Ser Ser Glu Phe Tyr Thr Thr Phe Lys Ala Cys
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Glu Gln Phe Leu Leu Asp Asn Arg Asn Asp Leu Ala Pro Ser Leu Gln
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Thr Leu

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 35 40 45
 Val Gln Met Ser Gln Leu Val Leu Pro Cys His Thr Asn His Arg Gly
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 Glu Leu Ser Ile Gly Gln Leu Leu Lys Trp Ile Asp Thr Thr Ala Cys
 65 70 75 80
 Leu Ser Ala Glu Arg His Ala Gly Cys Pro Cys Val Thr Ala Ser Met
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 Asp Asp Ile Tyr Phe Asp His Thr Ile Ser Val Gly Gln Val Val Asn
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 Ile Lys Ala Lys Val Asn Arg Ala Phe Asn Ser Ser Met Glu Val Gly
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 Lys Leu Lys Gln Val Ile Pro Leu Thr Glu Glu Glu Lys Thr Glu His
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 Gly Val Ala Ala Glu Arg Arg Arg Met Arg Leu Val Tyr Ala Asp Thr
 180 185 190
 Ile Lys Asp Leu Leu Thr His Cys Val Ile Gln Asp Asp Leu Asp Lys
 195 200 205
 Asp Cys Ser Asn Met Val Pro Ala Glu Lys Thr Arg Val Glu Ser Val
 210 215 220
 Glu Leu Val Leu Pro Pro His Ala Asn His Gln Gly Asn Thr Phe Gly

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Arg Leu Cys His	Ala His Pro Thr	Leu Lys Ala Ile	Glu Met Phe His			
	260	265	270			
Phe Arg Gly Pro	Ser Gln Val Gly Asp Arg	Leu Val Leu Lys	Ala Ile			
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Ala Tyr Arg Gln	Glu Ala Glu Thr Gln Arg	Arg His Ile Asn	Ser Ala			
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Pro Cys Asp Asn Gly Asp Pro Tyr Val Ile Ala Leu Arg Ser Val Thr
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Leu Pro Thr His His Glu Thr Pro Glu Tyr Gln Arg Gly Glu Thr Leu
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Cys Ser Gly Phe Cys Leu Trp Arg Glu Gly Asp Gln Met Thr Lys Val
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Ser Tyr Tyr Asn Gln Ala Thr Pro Gly Phe Leu Asn Tyr Val Thr Thr
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Thr Leu

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